Public Works (1907) Department.

G.O., No. 545-9

DATED 18-12-1907.

—

[Despatch Abstract.]

Madras Water Supply

Orders re: the Construction of an Experimental infiltration gallery on the down stream side of the Existing filter beds of the — , Communicated, with remarks, to the officers concerned.

Cs

[P. W. 25. 2,000—6-7-06.]

Indexed.

ASS 21/12

Asm 18/12

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

To be substituted for the Government Order of the same number and date.

P. W. C No.
10816/21-11-07

Government of Madras.

LOCAL AND MUNICIPAL DEPARTMENT.

Recd. } 1907. *Enclosures*

Regd. *Spare copies*

G.O., No. 2283 M., 11th November 1907.

~~Order. No.~~

Communicated to the ~~Supg~~ ~~Engineer~~ ... office concerned.

2. ... with reference to para 5 ... order.

Madura water-supply.

~~To Supg Engr~~ ... Circle ~~...~~ Proceedings Chief Engineer ... 12-07

Approving, with remarks, the proposals submitted by the Sanitary Engineer for the construction at an estimated cost of Rs. 9,610, of an experimental infiltration gallery on the down stream side of the existing filter beds of the — and stating that further orders will issue in the Public Works Department.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

Read—the following papers:—

I

G.O., No. 1795 M., dated 10th October 1906.

Abstract.—Approving the suggestion of the Sanitary Board that before carrying out the Sanitary Engineer's proposals for the construction of an experimental infiltration gallery on the down stream side of the existing filter beds in connection with the Madura water-supply the water in the locality should be tested; and requesting the Sanitary Engineer to report the result of the analysis of the water and the Municipal Council to report how it proposes to provide funds for carrying out the experiment.

II

Letter—from W. Hutton, Esq., A.M.I.C.E., Sanitary Engineer to Government.
To—the Secretary to Government, Local and Municipal Department.
Dated—Madras, the 15th July 1907.
No.—1841.

With reference to official memorandum, dated 12th July 1907, requesting me to report on the analysis of water from the down steam side of the filter beds in connection with the water-supply of Madura called for in G.O., Nos. 1795 M., dated 10th October 1906, and 797 M., dated 15th April 1907, I have the honour to state that a reply to the reference in question was sent to Government through the Sanitary Commissioner and Sanitary Board with this office No. 1505, dated 7th June 1907.

III

Proceedings of the Sanitary Board No. 240-S., dated 8th August 1907.

Read—the following paper:—

Letter—from W. Hutton, Esq., A.M.I.C.E., Sanitary Engineer to Government.
To—the Secretary to Government, Local and Municipal Department (through the Sanitary Commissioner and the Sanitary Board).
Dated—Madras, the 7th June 1907.
No.—1505.

With reference to paragraph 3 of the Sanitary Board's resolution No. 290-S., dated 10th August 1906, printed with G.O., No. 1795 M., dated 10th October 1906, and as ordered in paragraph 1 of the same Government Order, I have the honour to forward copy of the Chemical Examiner's analysis of a sample of water from a pot well sunk in the bed of the river on the down stream side of the infiltration gallery.

2. It will be observed that this chemical analysis shows that the water is "usable" and it seems otherwise satisfactory. In fact it appears to be superior to the water from the present gallery—*vide* copy of Chemical Examiner's report, dated 16th March 1906, attached.

3. As the new experimental gallery cannot be constructed just now owing to water expected in the river with the break of the south-west monsoon, I suggest that arrangements be made to start the work in December 1907 and complete it during the dry weather next year.

ENCLOSURES.

Report on the analysis of a sample of water.

Source as per label		.. ..	*Madura Head works.* Water from the pot well sunk on the down stream of the river at the *filter bed.*
Drawn as per label		.. ..	9th May 1907.
Received		.. ..	13th May 1907.
Examined		.. ..	13th May 1907.
Physical appearance.	Colour and transparency	..	Colourless and clear.
	Smell	.. .. ..	None.
Suspended matter		.. ..	*Nil.*
Quantitative.			
Total solids		Parts per 100,000.	56·000.
Temporary hardness ..		Do.	18°·500.
Permanent „ ..		Do.	1°·500.
Total hardness		Do.	20°·000.
Chlorine		Do.	11·715.
Free ammonia		Do.	Trace.
Albuminoid ammonia ..		Do.	0·003.
Oxygen absorbed (Tidy's process)		Do.	0·037.
Nitrous acid (NO_2) ..		Do.	*Nil.*
Qualitative.			
Nitrates			Present.
Sulphates			Do.
Phosphates			*Nil.*
Iron, poisonous metals			*Nil.*
Opinion			Usable.

Source as per label		.. ..	*Madura Water-works.* Water from the last tap at Big Teppakulam.
Drawn as per label		.. ..	7th March 1906.
Received		.. ..	12th March 1906.
Examined		.. ..	13th March 1906.
Physical appearance.	Colour and transparency	..	Colourless and clear.
	Smell	.. .. ..	None.

Microscopic examination of suspended matter.		None.
Quantitative.		
Total solids	Parts per 100,000.	70·000.
Temporary hardness ..	Do.	20°·500.
Permanent ,, ..	Do.	0°·500.
Total hardness	Do.	21°·000.
Chlorine	Do.	16·685.
Free ammonia	Do.	Trace.
Albuminoid ammonia ..	Do.	0·006.
Oxygen absorbed (Tidy's).	Do.	0·060.
Nitrous acid (NO_2) ..	Do.	*Nil.*
Qualitative.		
Nitrates		Trace.
Sulphates		Present.
Phosphates		*Nil.*
Iron, poisonous metals		*Nil.*
Opinion		Very hard water, gets cloudy on standing, forms deposit of matters constituting "hardness."

J. L. VANGEYZEL, Lt.-Col., I.M.S.,
Chemical Examiner.

Endt. No. 1680-*S., dated* 11*th June* 1907.

Forwarded.

H. THOMSON, Lt.-Col., I.M.S.,
Sanitary Commissioner for Madras.

Resolution—No. 240-*S., dated* 8*th August* 1907.

In compliance with G.O., No. 1795 M., dated 10th October 1906, the Sanitary Engineer submits the Chemical Examiner's analysis of a sample of water taken from a pot well sunk in the down stream side of the infiltration gallery in connection with the Madura water-works. The analysis shows the water to be "usable" and otherwise satisfactory.

2. The construction of the new infiltration gallery which has been proposed is recommended to Government; work to start in December, as proposed by the Sanitary Engineer.

(True Extract.)

R. PARSONS,
Secretary.

To the Secretary to Government, Local and Municipal Department,
with papers in original.

Copy to the Sanitary Engineer.
,, ,, Sanitary Commissioner.

IV

Memorandum from the Sanitary Commissioner, No. 2801-S., dated 23rd September 1907.

I inspected the Madura water-works in company with the Chairman on the 19th September. The position of the proposed infiltration gallery is about the middle of the river in front of the pumping station and it will run at right angles to the stream.

On the south bank about 400 yards down stream from the filters is the site of an old burial-ground known as the Puttoo Thope burial-ground. This graveyard has been closed to burial since 1895.

On the north bank about 800 yards down stream from the filter beds is the Thathaneri burial and cremation ground now in use and is over 70 yards outside the flood bund of the river.

About 100 yards up stream above the filters and about 80 yards outside the flood bund of the river is the Arapallayam cremation ground. It is a raised piece of ground about 60′ × 40′ situated in the midst of paddy fields and surrounded by wet cultivation. During September, October and November when the winds blow southward the smell from the burning of corpses is very offensive to those living at the pumping station. This cremation ground should be moved at least ½ mile further to the south-west.

The village of Arapallayam is situated about 740 yards up stream above the filter beds on the bank of the river. It has a population of 1,500 with 200 houses the greater number of which are mud wall thatched huts. This village must cause a good deal of contamination to the river. In fact I saw people bathing and washing clothes in this position. An effort has been made to keep the people from the river by conserving the river for 3,300 feet from the filters upwards towards the village. The portion conserved has been marked off and a watchman appointed. The proximity of this village to the river and the filters is a menace to the health of the town as frequently outbreaks of cholera have taken place in it and the posting of a watchman will not prevent the people from using the river. This village should be removed.

The District Jail is one mile distant to the south-east from the river.

In the compound of the pumping station is a hollow piece of ground overgrown with rank vegetation in which water collects. This hollow should be filled in with sand from the river. The collection of water will not only tend to hurt the river bund by soakage but will favour the breeding of mosquitoes.

Along the north bank in the river bed a channel has been cut presumably for irrigation purposes. This channel should be closed as it tends to scour and weaken the river bank.

The banks of the river should be revetted at the sides where the scour is weakening and eroding the bund or if this be too expensive they should be protected by rush work as is done in Trichinopoly.

I see no sanitary objection to the site of the proposed infiltration gallery.

Order—No. 2283 M., dated 11th November 1907.

The Government approve of the proposals submitted by the Sanitary Engineer for the construction at an estimated cost of Rs. 9,610 of an experimental infiltration gallery on the down stream side of the existing filter beds of the Madura water-supply. The proposals were recommended by the Sanitary Board in its Resolutions No. 290-S., dated 10th August 1906, and No. 240-S., dated 8th August 1907.

2. Further orders will issue in the Public Works Department regarding the plans and estimates and the execution of the work.

3. The recommendations of the Sanitary Commissioner in his Memorandum No. 2801-S., dated 23rd September 1907, read above, that the Arapallayam cremation ground should be moved at least half a mile further to the south-west, and that the hollow piece of ground in the compound of the pumping station should be filled up, will be referred to the Municipal Council of Madura for early consideration and necessary action.

4. The Collector of Madura will be requested to report the estimated cost of removing the village of Arapallayam, as recommended by the Sanitary Commissioner.

5. The other suggestions of this officer regarding the closure of the channel running along the north bank of the river-bed and the alternative proposals either to revet the sides of the banks of the river or to protect them by rush work, will be considered in the Public Works (Irrigation) Department.

(True Extract.)

C. A. Souter

for *Ag. Secretary to Government.*

To the Chairman, Municipal Council, Madura.
,, Collector of Madura.
,, President, District Board, Madura.
,, Sanitary Engineer.
,, ,, Commissioner.
,, ,, Board.
,, Public Works Department, with plans and estimates.
,, Public Works (Irrigation) Department.

PUBLIC WORKS DEPARTMENT,

IRRIGATION BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

G. O. No.2283 M dated 11-11-07

Order 545-I, d/ 18-12-1907.

Communicated to the officers -- concerned.

2. With reference to para 5 of the order, the Supg.Engr.VI Circle is re- quested to expedite his reply to -- the Chief Engineer's(for irrigation) memo No.4302 dated 4-11-07.

3. The G.O. bearing the ~~same~~ number and date for ~~to~~ which this is to be ~~the~~ substituted was not communicated to Officers of this department.

To the Chief Engr.for Irrgn.
" Supg.Engr. VI Circle.

DESPATCHED
20 DEC 1907

No. 10846
PASSED ON BY
R. C.
U. R. C. } 21. 11-07
REF.
R. K.
D. O.

Government of Madras.

LOCAL AND MUNICIPAL DEPARTMENT.

Recd. } 1907.
Regd.

Enclosures
Spare copies 5

G.O., No. 2283 M., 11th November 1907.

M. P.

Madura water-supply.

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	Smell	None.
Suspended matter		*Nil.*
Quantitative.		
Total solids	Parts per 100,000.	56·000.
Temporary hardness	Do.	18°·500.
Permanent ,,	Do.	1°·500.
Total hardness	Do.	20°·000.
Chlorine	Do.	11·715.
Free ammonia	Do.	Trace.
Albuminoid ammonia	Do.	0·003.
Oxygen absorbed (Tidy's process)	Do.	0·037.
Nitrous acid (NO_2)	Do.	*Nil.*
Qualitative.		
Nitrates		Present.
Sulphates		Do.
Phosphates		*Nil.*
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Opinion		Usable.

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Total solids	Parts per 100,000.	70.000.
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(True Extract.)

C A Souter

for *Ag. Secretary to Government.*

To the Chairman, Municipal Council, Madura.
,, Collector of Madura.
,, President, District Board, Madura.
,, Sanitary Engineer.
,, ,, Commissioner.
,, ,, Board.
,, Public Works Department, with plans and estimates.
,, Public Works (Irrigation) Department.

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